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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,029	11/04/2003	Brian Grove	G&C 30074.50-US-U1	6164

23973 7590 02/06/2009

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EXAMINER	
SHIFERAW, ELENI A	

ART UNIT	PAPER NUMBER
2436	

MAIL DATE	DELIVERY MODE
02/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/701,029	GROVE ET AL.	
	Examiner	Art Unit	
	ELENI A. SHIFERAW	2436	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/20/2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34,36-49,51-64 and 66-78* is/are pending in the application.

4a) Of the above claim(s) *1-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *34,36-49,51-64 and 66-78* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 34, 36-49, 51-64 and 66-78 are presented for examination; claims 1-33 are non-elected and/or withdrawn.

Election/Restrictions

2. Claims 1-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 09/28/2007.

Response to Arguments

Regarding argument the 101 rejection for claims 49, and 51-63 not being proper and/or applicant's argument wherein "each of the rejected claims contains elements as a means for performing specified functions, in accordance with 35 USC 112, and therefore recites a statutory apparatus," is not persuasive because the means plus functions are not tangible and/or the specification does not specifically describe the structures of that perform the means plus functions as being implemented by hardware structure. For instance, the specification also describes, on page 8 lines 13-page 9 lines 20 the means for retrieving, generating and transmitting as software. Therefore the rejection is proper and is maintained.

Applicant's art arguments with respect to claims 34, 36-49, 51-64 and 66-78 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 1 O1

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 49, and 51-63 are rejected under 35 U.S.C. 101 because it is directed to non-statutory subject matter as failing to fall within a statutory category and as being directed to software per se (although the preamble of claim 1 recites a "An apparatus" it does not inherently mean that the claim is directed to a machine). The specification also describes, on page 8 lines 13-page 9 lines 20 the means for retrieving, generating and transmitting as software. Therefore, claims 49, and 51-63 are software per se. See MPEP 2106.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 34, 38-44, 49, 53-59, 64, and 68-74 rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima USPN 5225664 in view of Ho et al. US PG Pubs 20030143989 A1 and Caci et al. US Pub. 2007/0145125 A1.

Regarding claims 34, 49 and 64, Iijima discloses a method/apparatus of authenticating a hardware token (*IC card 1*) for operation with a host (*terminal device 8*), comprising the steps of:

retrieving a value X (col. *4 lines* 42-64; *C2X*) from a memory accessible to an authenticating entity, the value X generated from a computer fingerprint F (*internal data NNNNN*) of the host (col. 4 lines 42-50 and col. 3 lines 64-67) and an identifier P securing access to the token, wherein the host fingerprint F is computed at least in part from host information C (col. 4 lines 42-49 and col. 4 lines 21-26; *internal data NNNNN,... random number...card number/SN*);

generating the identifier P at least in part from the value X and the fingerprint F (col. 4 lines 55-63 and lines 42-49; *C2 is generated by encrypting random data B using key data NNNNN*); and

transmitting the generated identifier P to the token to authenticate the token for operation with the host (col. 4 lines 64-col. 5 lines 23; *C2 is transmitted to IC card for authentication*).

Iijima fails to disclose regenerating the same identifier value P at least in part from the value X and the fingerprint F and transmitting the regenerated identifier P.

However Ho et al. discloses generating a new same identifier based on received information and comparing the new identifier with received identifier and communicating based on comparing result (see par. 26, claim 27 and fig. 3 element 320, 370, 380, and 395).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Ho et al. within the system of Iijima because they are analogous in authentication. One would have been motivated to modify the teachings to provide proper access based on authentication.

The combination of Iijima and Ho et al. fail to explicitly disclose wherein retrieving a value X from a memory separate from the token accessible to an authenticating entity, the value X generated from a **non-varying** computer fingerprint F of the host and an identifier P securing access to the token, wherein the host fingerprint F is computed at least in part from **non-varying host information C based on a unique characteristic of the host.**

However Caci et al. discloses The combination of Iijima and Ho et al. fail to explicitly disclose wherein retrieving a value X from a memory separate from the token accessible to an authenticating entity, the value X generated from a **non-varying** computer fingerprint F of the host and an identifier P securing access to the token, wherein the host fingerprint F is computed at least in part from **non-varying host information C based on a unique characteristic of the host (see par. 51-54, claim 1 and fig. 8 and 11).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teaching of Caci et al. within the combination system because they are analogous in authentication. One would have been motivated to incorporate the teachings to secure the data.

Regarding claims 38, 53 and 68, Iijima discloses the method/apparatus, wherein the value X is computed in the token (col. 4 lines 42-49).

Regarding claims 39, 54 and 69, Iijima discloses the method/apparatus, wherein the value X is computed according to X=f(P,F), wherein f(P,F) is a reversible function such that

f(f(P,F),F)=P (col. 3 lines 56-col. 4 lines 64).

Regarding claims 40, 55 and 70, Iijima discloses the method/apparatus, wherein f(P,F) comprises P XOR F (col. 3 lines 56-col. 4 lines 64).

Regarding claims 41, 56 and 71, Iijima discloses the method/apparatus, wherein the value X is further computed at least in part from a user identifier U (col. 2 lines 43-62).

Regarding claims 42, 57 and 72, Iijima discloses the method/apparatus, wherein the value X is computed according to X=f(P,U,F), wherein f(P,U,F) is a reversible function such that f(f(P,U,F),U,F)=P (col. 3 lines 56-col. 4 lines 64).

Regarding claims 43, 58 and 73, Iijima discloses the method/apparatus, wherein f(P,U,F) is P XOR U XOR F (col. 3 lines 56-col. 4 lines 64).

Regarding claims 44, 59 and 74, Iijima discloses the method/apparatus, wherein: the authorizing entity is a host computer communicatively coupleable to the token; and the value X is stored in the host computer (fig. 1 elements 1 and 8).

7. **Claims 45-48, 60-63, and 75-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima USPN 5225664, Ho et al. US PG Pubs 20030143989 A1 and Caci et al. US Pub. 2007/0145125 A1 and further in view of Miura USPN 6952775**

B1.

Regarding claims 45, 60 and 75, Iijima fails to disclose hashing. However Miura discloses the method/apparatus of IC card 103 authentication (see fig. 1) and the authentication comprising hashing multiple entity's personal information (see fig. 6-7), storing the computed hash value (col. 2 lines 64-col. 3 lines 7). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Miura within the combination system to compute a hash value of value x because computing a hash value of authenticating data is well known at the time of the invention for authentication.

Regarding claims 46, 61 and 76, Miura discloses the method/apparatus of IC card 103 authentication (see fig. 1) and the authentication comprising hashing multiple entity's personal information (see fig. 6-7), storing the computed hash value (col. 2 lines 64-col. 3 lines 7). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Miura within the combination system to compute a hash value of in part from the fingerprint F; and retrieving the value X associated with the reference value H because computing a hash value of authenticating data is well known at the time of the invention for authentication.

Regarding claims 47, 62 and 77, Miura discloses the method/apparatus of IC card 103 authentication (see fig. 1) and the authentication comprising hashing multiple entity's personal information (see fig. 6-7), storing the computed hash value (col. 2 lines 64-col. 3

lines 7). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Miura within the combination system to compute a hash value of in part from the fingerprint F; and retrieving the value X associated with the reference value H because computing a hash value of authenticating data is well known at the time of the invention for authentication.

Regarding claims 48, 63 and 78, Miura discloses the method/apparatus of IC card 103 authentication (see fig. 1) and the authentication comprising hashing multiple entity's personal information (see fig. 6-7), storing the computed hash value (col. 2 lines 64-col. 3 lines 7). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Miura within the combination system to compute a hash value of in part from the fingerprint F; and retrieving the value X associated with the reference value H because computing a hash value of authenticating data is well known at the time of the invention for authentication.

8. Claims 36-37, 51-52, and 66-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima USPN 5225664, Ho et al. US PG Pubs 20030143989 A1 and Caci et al. US Pub. 2007/0145125 A1 and further in view of Ayyagari et al. 2003/0208677.

Regarding claims 36, 51 and 66, Iijima teaches wherein the host fingerprint F is computed at least in part from host information C (see col. 3 lines 56-col. 4 lines 64) but fails to disclose wherein the host fingerprint F is computed at least in part from a server specific value V. However Ayyagari et al. discloses identifier information comprising a

concatenated hardware address of the access server and a hardware address of a client. There fore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Ayyagari et al. with in the combination system because they are analogous in authentication. One would have been motivated to incorporate the teachings to include the remote server within the authentication.

Regarding claims 37, 52 and 67, Iijima teaches wherein the host fingerprint F is computed at least in part from host information C and a fixed string Z (see col. 3 lines 56-col. 4 lines 64) but fails to disclose wherein the host fingerprint F is computed at least in part from a server specific value V and a fixed string Z. However Ayyagari et al. discloses identifier information comprising a concatenated hardware address of the access server and a hardware address of a client. Therefor it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Ayyagari et al. with in the combination system because they are analogous in authentication. One would have been motivated to incorporate the teachings to include the remote server within the authentication.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni A. Shiferaw whose telephone number is 571-272-3867. The examiner can normally be reached on Mon-Fri 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser R. Moazzami can be reached on (571) 272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eleni A Shiferaw/

Examiner, Art Unit 2436

/Nasser G Moazzami/

Supervisory Patent Examiner, Art Unit 2436